



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/915,326	07/27/2001	Yusuke Omura	35.C15619	5934

5514 7590 02/28/2005

FITZPATRICK CELLA HARPER & SCINTO  
30 ROCKEFELLER PLAZA  
NEW YORK, NY 10112

EXAMINER
----------

WILSON, JACQUELINE B

ART UNIT	PAPER NUMBER
----------	--------------

2612

DATE MAILED: 02/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/915,326	<b>Applicant(s)</b> OMURA, YUSUKE	
	<b>Examiner</b> Jacqueline Wilson	<b>Art Unit</b> 2612	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 July 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 8-10 is/are rejected.
- 7) ☒ Claim(s) 2-7 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>11/06/01</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Drawings***

1. Figures 12-14 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

2. Claim 10 is objected to because of the following informalities:

In line 4, "mountaing" should be changed to --mounting--.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**2. Claims 1, 8-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Ueda et al (US 5,150,146).**

Regarding Claim 1, Ueda et al teaches a projection apparatus which projects a pattern image (figs. 7A, 7B, and 9) onto an object so as to detect, by a phase difference scheme (col. 5, lines 4+), a focus state of a phototaking system or observation system (X), comprising, a first projecting system (fig. 5) for projecting a first pattern (as shown in figs. 7A and 7B) extending in a first direction to a plurality of positions arranged in the first direction and including a central focus detection region on the object (IS1), and a second projecting system (fig. 8) for projecting a second pattern (see fig. 9, 16) extending in a first direction to a plurality of positions arranged in the first direction and including a central focus detection region on the object (see fig. 9).

Regarding Claim 8 Ueda et al teaches the number of pattern images projected by one of the first and second projecting systems is a predetermined number smaller than the number of pattern images projected by the other projecting system (see fig. 5, element 13 and fig. 8, element 16; clearly one pattern has a smaller predetermined number than the other).

Regarding Claim 9, Ueda et al teaches the one projecting system has a synthesizing optical element for synthesizing the plurality of pattern images formed by a projecting optical element (fig. 5) of the one optical system into a predetermined number of pattern images and projecting the pattern images (as shown in fig. 7A).

Regarding Claim 10, Ueda et al teaches a focus detecting unit (referred to as focus detecting device X, with further reference to block AFMO), a mounting portion

Art Unit: 2612

adapted to mount the projection apparatus of Claim 1, (see fig. 1, elements 3 and 1; see also col. 10, lines 4+), wherein said phototaking apparatus detects a focus state of the phototaking system using a pattern image projected by the projection apparatus and performs focus adjusting operation of the phototaking system on the basis of the detection result (col. 11, lines 11+).

***Allowable Subject Matter***

**3. Claims 2-7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.**

Regarding Claim 2, the prior art neither teaches nor fairly suggests a projection apparatus which projects a pattern image onto an object so as to detect, by a phase difference scheme, a focus state of a phototaking system or observation system, comprising: a first projecting system for projecting a first pattern extending in a first direction to a plurality of positions arranged in the first direction and including a central focus detection region on the object; and a second projecting system for projecting a second pattern extending in a second direction to a plurality of positions arranged in the second direction and including the central focus detection region on the object, wherein **a difference is generated between brightness of the pattern image projected by one of said first and second projecting systems and that of the pattern image projected by the other projecting system.**

Regarding Claim 4, the prior art neither teaches nor fairly suggests a projection apparatus which projects a pattern image onto an object so as to detect, by a phase difference scheme, a focus state of a phototaking system or observation system, comprising: a first projecting system for projecting a first pattern extending in a first direction to a plurality of positions arranged in the first direction and including a central focus detection region on the object; and a second projecting system for projecting a second pattern extending in a second direction to a plurality of positions arranged in the second direction and including the central focus detection region on the object, wherein **said first projecting system has a projecting optical element having a plurality of projecting optical axes in the first direction, and said second projecting system has a projecting optical element having a plurality of projecting optical axes in the second direction.**

Regarding Claim 7, the prior art neither teaches nor fairly suggests a projection apparatus which projects a pattern image onto an object so as to detect, by a phase difference scheme, a focus state of a phototaking system or observation system, comprising: a first projecting system for projecting a first pattern extending in a first direction to a plurality of positions arranged in the first direction and including a central focus detection region on the object; and a second projecting system for projecting a second pattern extending in a second direction to a plurality of positions arranged in the second direction and including the central focus detection region on the object, wherein **said first projecting system and said second projecting system have light sources which has the same characteristics, said first and second projecting systems have**

Art Unit: 2612

**identical pattern masks** arranged in front of said light sources to form the respective patterns, and projecting optical elements which have the same characteristics and a plurality of projecting optical axes, and **said first and second projecting systems are laid out to be phase-shifted each other by  $90^0$  when viewed from a direction of optical axis.**

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacqueline Wilson whose telephone number is (703) 308-5080. The examiner can normally be reached on 8:30am-5:00pm (alternate Fridays off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on (703) 305-4929. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

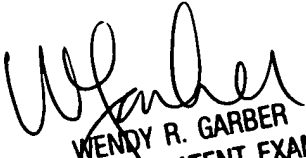
Application/Control Number: 09/915,326

Page 7

Art Unit: 2612

JW

02/14/05

  
WENDY R. GARBER  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600